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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,033	07/03/2001	Mark Henry Pausch	011420102	5078

7590 07/01/2003

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Garrett & Dunner
1300 I Street NW
Washington, DC 20005

EXAMINER

BRANNOCK, MICHAEL T

ART UNIT	PAPER NUMBER
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1646

DATE MAILED: 07/01/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/786,033

Applicant(s)

Pausch

Examiner
Michael Brannock

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1646

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 1, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claims 1-29 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

1. Applicant's response (Paper 3, 4/13/03) to the outstanding restriction requirement (1/2/03) is noted. In view of Applicant's arguments, and upon further consideration, the examiner deems it necessary to issue a new restriction requirement. The previous restriction requirement is withdrawn.

Election/Restrictions

2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-14, 20, 21-24, 28, 29, as the claims relate to a deletion in the third intracellular domain, drawn to a yeast cell comprising a heterologous GPCR modified with a deletion in the third intracellular domain.

Group II, claim(s) 1-3, 9-12, 15-19, 20, as the claims relate to a substitution modification in the third intracellular domain, drawn to a yeast cell comprising a heterologous GPCR modified with a substitution in the third intracellular domain.

Group III, claim(s) 21-23, 25-27, 28, as the claims relate to a deletion of the carboxyl terminal domain, drawn to a yeast cell comprising a heterologous GPCR modified with a deletion in the carboxyl terminal domain.

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3. The inventions listed as Groups I-^{III}~~IV~~ do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Pursuant to 37 C.F.R. 147(d), this Authority considers that the main invention in the instant application comprises the first recited product, namely a yeast cell of claim 1 comprising a nucleic acid sequence encoding a modified heterologous GPCR, wherein the modification comprises a mutation in an intracellular domain of the GPCR results in an improved functional response in a cell based assay, as compared to wild-type, and wherein the modified GPCR is muscarinic acetylcholine receptor.

The technical feature of a mutation of an intracellular domain that improves a functional response in a cell based assay is known in the art and therefore the technical feature linking the inventions of Groups I-III does not constitute a special technical feature defined by PCT Rule 13.2, as it does define a contribution over the prior art. Sledziewski et al., U.S. Patent No: 5576210, teach a yeast cell of claim 1 comprising a nucleic acid sequence encoding a modified heterologous GPCR, wherein the modification comprises a mutation in an intracellular domain of the GPCR results in an improved functional response in a cell based assay, as compared to wild-type, and wherein the modified GPCR is muscarinic acetylcholine receptor (see the Abstract and col. 3).

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4. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

The claims encompass a plurality of patently distinct yeast cell comprising distinct species GPCR receptor types, e.g. muscarinic acetylcholine receptors, cholecystokinin CCKB receptors, somatostatin receptors, alpha 2A adrenergic receptors, serotonin receptors and neurotensin receptors.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

5. The claims are deemed to correspond to the species listed above in the following manner:

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Claims 1-7, 9, 13, 15-25, 28, 29 correspond to muscarinic acetylcholine receptors

Claims 1-7, 10, 13, 15-25, 28, 29 correspond to cholecystokinin CCKB receptors

Claims 1-6, 11, 13-25, 28, 29 correspond to somatostatin receptors

Claims 1-6, 8, 13, 15-25, 28-29 correspond to serotonin receptors

Claims 1-7, 12, 13, 15-25, 28, 29 correspond to alpha 2A adrenergic receptors

Claims 15-29 correspond to neurotensin receptors

The following claim(s) are generic: 1-7, 15-25, 28, 29.

6. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons:

As set forth above, the technical feature of a mutation of an intracellular domain that improves a functional response in a cell based assay is known in the art and therefore the technical feature linking the inventions of comprising the different above recited species does not constitute a special technical feature defined by PCT Rule 13.2, as it does not define a contribution over the prior art. Sledziewski et al., U.S. Patent No: 5576210, teach a yeast cell of claim 1 comprising a nucleic acid sequence encoding a modified heterologous GPCR, wherein the modification comprises a mutation in an intracellular domain of the GPCR results in an improved functional response in a cell based assay, as compared to wild-type, and wherein the modified GPCR is muscarinic acetylcholine receptor (see the Abstract and col. 3).

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7. Applicant's arguments, in Paper 13, are held in abeyance as they do not appear to address the basis of the instant restriction requirement.

8. A telephone call was made to Steve O'Connor on 6/23/03 to request an oral election to the above restriction requirement, but did not result in an election being made. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

9. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined, i.e. one group and one species, even though the requirement be traversed (37 CFR 1.143).

10. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Brannock, Ph.D., whose telephone number is (703) 306-5876. The examiner can normally be reached on Mondays through Thursdays from 8:00 a.m. to 5:30 p.m. The examiner can also normally be reached on alternate Fridays.

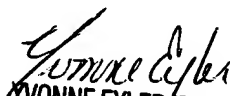
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler, Ph.D., can be reached at (703) 308-6564.

Official papers filed by fax should be directed to (703) 308-4242. Faxed draft or informal communications with the examiner should be directed to (703) 308-0294.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

MB

June 25, 2003


YVONNE EYLER, PH.D.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600